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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/590,590
				Filing Date	August 24, 2006
				First Named Inventor	Swadeshmukul Santra
				Art Unit	1636
				Examiner Name	
Sheet	1	of	12	Attorney Docket Number	UF.420XC1

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	U1	US-5,087,440	02-11-1992	Cacheris <i>et al.</i>	All
	U2	US-5,155,215	10-13-1992	Ranney	All
	U3	US-6,207,392	03-27-2001	Weiss <i>et al.</i>	All
	U4	US-2005/220714 A1	10-06-2005	Kauzlarich <i>et al.</i>	All
	U5	US-2003/0236457 A1	12-25-2003	Mericle <i>et al.</i>	All
	U6	US-2004/0023415 A1	02-05-2004	Sokolov <i>et al.</i>	All
	U7	US-2004/0067201 A1	04-08-2004	Perkins <i>et al.</i>	All
	U8	US-6,649,138	11-18-2003	Adams <i>et al.</i>	All
	U9	US-6,815,064	11-09-2004	Treadway <i>et al.</i>	All

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	<sup>6</sup>
	F1	WO 01/89585 A1	11-29-2001	Biocrystal Ltd.	All	
	F2	WO 2004/066361 A2	08-05-2004	The Board of Trustees of the University of Arkansas	All	
	F3	WO 2005/041747 A2	05-12-2005	The Trustees of the University of Pennsylvania	All	
	F4					
	F5					
	F6					
	F7					

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	U10	US-5,990,479	11-23-1999	Weiss <i>et al.</i>	All
	U11	US-6,207,392	03-27-2001	Weiss <i>et al.</i>	All
	U12	US-6,423,551	07-23-2002	Weiss <i>et al.</i>	All
	U13	US-6,699,723	03-02-2004	Weiss <i>et al.</i>	All
	U14	US-6,251,303	06-26-2001	Bawendi <i>et al.</i>	All
	U15	US-6,322,901	11-27-2001	Bawendi <i>et al.</i>	All
	U16	US-6,444,143	09-03-2002	Bawendi <i>et al.</i>	All
	U17	US-			
	U18	US-			

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	R1	AKERMAN, M.E. <i>et al.</i> , "Nanocrystal Targeting <i>In Vivo</i> " <i>Proceedings of Nat'l Acad. of Sci., USA</i> , October 1, 2002, pp. 12617-12621, Vol. 99, No. 20.		
	R2	ALIVISATOS, A.P., "Perspectives on the Physical Chemistry of Semiconductor Nanocrystals" <i>J. Phys. Chem.</i> , March 26, 1996, pp. 13226-13239, Vol. 100.		
	R3	ZHAO, M. <i>et al.</i> , "Differential Conjugation of Tat Peptide to Superparamagnetic Nanoparticles and Its Effect on Cellular Uptake" <i>Bioconjugate Chemistry</i> , 2002, pp. 840-844, Vol. 13, No. 4.		
	R4	ARRIAGADA, F.J. <i>et al.</i> , "Synthesis of Nanosize Silica in a Nonionic Water-in-Oil Microemulsion: Effects of the Water/Surfactant Molar Ratio and Ammonia Concentration" <i>Journal of Colloid and Interface Science</i> , 1999, pp. 210-220, Vol. 211.		
	R5	BALLOU, B. <i>et al.</i> , "Noninvasive Imaging of Quantum Dots in Mice" <i>Bioconjugate Chem.</i> , 2004, pp. 79-86, Vol. 15, No. 1.		
	R6	BECKER, W.G. <i>et al.</i> , "Photoluminescence and Photoinduced Oxygen Adsorption of Colloidal Zinc Sulfide Dispersions" <i>J. Phys. Chem.</i> , 1983, pp. 4888-4893, Vol. 87.		
	R7	BEHBOUDNIA, M. <i>et al.</i> , "Systematics in the nanoparticle band gap of ZnS and Zn <sub>1-x</sub> M <sub>x</sub> S (M= Mn, Fe, Ni) for various dopant concentrations" <i>Physical Review B</i> , 2001, pp. 035316:1-035316:5, Vol. 63.		
	R8	BENTZEN, E.L. <i>et al.</i> , "Progression of Respiratory Syncytial Virus Infection Monitored by Fluorescent Quantum Dot Probes" <i>Nano Letters</i> , 2005, pp. 591-595, Vol. 5, No. 4.		
	R9	BHARGAVA, R.N., "Doped nanocrystalline materials - Physics and applications" <i>Journal of Luminescence</i> , 1996, pp. 85-94, Vol. 70.		
	R10	BHARGAVA, R.N. <i>et al.</i> , "Optical Properties of Manganese-Doped Nanocrystals of ZnS" <i>Physical Review Letters</i> , January 17, 1997, pp. 416-419, Vol. 72, No. 3.		
	R11	YANG, H. <i>et al.</i> , "Electroluminescence from Hybrid Conjugated Polymer—CdS:Mn/ZnS Core/Shell Nanocrystal Devices" <i>J. Phys. Chem. B.</i> , 2003, pp. 9705-9710, Vol. 107.		
	R12	BOL, A.A. <i>et al.</i> , "Temperature dependence of the luminescence of nanocrystalline CdS/Mn <sup>2+</sup> " <i>Journal of Physics and Chemistry of Solids</i> , 2003, pp. 247-252, Vol. 64.		
	R13	BOL, A.A. <i>et al.</i> , "Luminescence Quantum Efficiency of Nanocrystalline ZnS:Mn <sup>2+</sup> . 2. Enhancement by UV Irradiation" <i>J. Phys. Chem. B</i> , 2001, pp. 10203-10209, Vol. 105.		

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NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	R14	BOL, A.A. <i>et al.</i> , "Doped semiconductor nanoparticles - a new class of luminescent materials?" <i>Journal of Luminescence</i> , 2000, pp. 315-318, Vol. 87-89.		
	R15	BOL, A.A. <i>et al.</i> , "On the Incorporation of Trivalent Rare Earth Ions in II-VI Semiconductor Nanocrystals" <i>Chem. Mater.</i> , 2002, pp. 1121-1126, Vol. 14.		
	R16	BOL, A.A. <i>et al.</i> , "Luminescence Quantum Efficiency of Nanocrystalline ZnS:Mn <sup>2+</sup> . 1. Surface Passivation and Mn <sup>2+</sup> Concentration" <i>J. Phys. Chem. B</i> , 2001, pp. 10197-10202, Vol. 105.		
	R17	BOUSQUET, J.C. <i>et al.</i> , "Gd-DOTA: Characterization of a New Paramagnetic Complex <sup>1n</sup> " <i>Radiology</i> , 1988, pp. 693-698, Vol. 166.		
	R18	BRUSCHEZ, M. <i>et al.</i> , "Semiconductor Nanocrystals as Fluorescent Biological Labels" <i>Science</i> , September 25, 1998, pp. 2013-2016, Vol. 281.		
	R19	CAO, L. <i>et al.</i> , "Luminescence enhancement of core-shell ZnS:Mn/ZnS nanoparticles" <i>Appl. Phys. Letters</i> , June 10, 2002, pp. 4300-4302, Vol. 80, No. 23.		
	R20	CARAVAN, P. <i>et al.</i> , "Gadolinium(III) Chelates as MRI Contrast Agents: Structure, Dynamics, and Applications" <i>Chem. Rev.</i> , 1999, pp. 2293-2352, Vol. 99.		
	R21	CHAN, W.C.W. <i>et al.</i> , "Luminescent quantum dots for multiplexed biological detection and imaging" <i>Curr. Opin. In Biotech.</i> , 2002, pp. 40-46, Vol. 13.		
	R22	CHAN, W.C.W. <i>et al.</i> , "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection" <i>Science</i> , September 25, 1998, pp. 2016-2018, Vol. 281, No. 5385.		
	R23	DABBOUSI, B.O. <i>et al.</i> , "(CdSe) ZnS Core-Shell Quantum Dots: Synthesis and Characterization of a Size Series of Highly Luminescent Nanocrystallites" <i>J. Phys. Chem. B</i> , 1997, pp. 9463-9475, Vol. 101.		
	R24	DERFUS, A.M. <i>et al.</i> , "Probing the Cytotoxicity of Semiconductor Quantum Dots" <i>Nano Letters</i> , 2004, pp. 11-18, Vol. 4, No. 1.		
	R25	DIETZ, G.P.H. <i>et al.</i> , "Delivery of bioactive molecules in the cell: the Trojan horse approach" <i>Mol. Cell. Neurosci.</i> , 2004, pp. 85-131, Vol. 27.		
	R26	DUBERTRET, B. <i>et al.</i> , "In vivo Imaging of Quantum Dots Encapsulated in Phospholipid Micelles" <i>Science</i> , November 29, 2002, pp. 1759-1762, Vol. 298, No. 5599.		

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	R27	GALLAGHER, D. <i>et al.</i> , "Doped zinc sulfide nanocrystals precipitated within a poly(ethylene oxide) matrix – processing and optical characteristics" <i>Journal of Crystal Growth</i> , 1994, pp. 970-975, Vol. 138.		
	R28	GAO, X. <i>et al.</i> , "In vivo cancer targeting and imaging with semiconductor quantum dots" <i>Nature Biotech.</i> , August 2004, pp. 969-976, Vol. 22, No. 8.		
	R29	GAO, X. <i>et al.</i> , "Molecular profiling of single cells and tissue specimens with quantum dots" <i>Trends in Biotech.</i> , September 2003, pp. 371-373, Vol. 21, No. 9.		
	R30	GAPONIK, N. <i>et al.</i> , "Labeling of Biocompatible Polymer Microcapsules with Near-Infrared Emitting Nanocrystals" <i>Nano Letters</i> , 2003, pp. 369-372, Vol. 3, No. 3.		
	R31	GERION, D. <i>et al.</i> , "Synthesis and Properties of Biocompatible Water-Soluble Silica-Coated CdSe/ZnS Semiconductor Quantum Dots" <i>J. Phys. Chem. B</i> , 2001, pp. 8861-8871, Vol. 105.		
	R32	GUPTA, S. <i>et al.</i> , "Phosphor efficiency and deposition temperature in ZnS:Mn A.C. thin film electroluminescence display devices" <i>Thin Solid Films</i> , 1997, pp. 33-37, Vol. 299.		
	R33	HINES, M.A. <i>et al.</i> , "Synthesis and Characterization of Strongly Luminescing ZnS-Capped CdSe Nanocrystals" <i>J. Phys. Chem.</i> 1996, pp. 468-471, Vol. 100.		
	R34	HOSHINA, T. <i>et al.</i> , "Luminescence Excitation Spectra and Their Exciton Structures of ZnS Phosphors. II. Al and Te Doped Phosphors" <i>Jpn. J. Appl. Phys.</i> , 1980, pp. 279-287, Vol. 19, abstract.		
	R35	HUBER, M.M. <i>et al.</i> , "Fluorescently Detectable Magnetic Resonance Imaging Agents" <i>Bioconjugate Chem.</i> , 1998, pp. 242-249, Vol. 9.		
	R36	IHARA, M. <i>et al.</i> , "Preparation and Characterization of Rare Earth Activators Doped Nanocrystal Phosphors" <i>J. of the Electrochem. Soc.</i> , 2000, pp. 2355-2357, Vol. 147, No. 6.		
	R37	JAISWAL, J.K. <i>et al.</i> , "Long-Term Multiple Color Imaging of Live Cells Using Quantum Dot Bioconjugates" <i>Nature Biotech.</i> , January 2003, pp. 47-51, Vol. 21.		
	R38	JAISWAL, J.K. <i>et al.</i> , "Potentials and pitfalls of fluorescent quantum dots for biological imaging" <i>TRENDS in Cell Bio.</i> , September 2004, pp. 497-504, Vol. 14, No. 9.		
	R39	JASZCZYN-KOPEC, P. <i>et al.</i> , "Excitonic Excitation Spectra in ZnS: Cl Crystal Under Pressure" <i>Journal of Luminescence</i> , 1983, pp. 319-326, Vol. 28.		

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	R40	JIANG, W. <i>et al.</i> , "Semiconductor quantum dots as contrast agents for whole animal imaging" <i>TRENDS in Biotech.</i> , December 2004, pp. 607-609, Vol. 22, No. 12.		
	R41	JIN, C. <i>et al.</i> , "Luminescence of Mn <sup>2+</sup> doped ZnS nanocrystallites" <i>J. of Luminescence</i> , 1996, pp. 315-318, Vol. 66-67.		
	R42	JOSEPHSON, L. <i>et al.</i> , "Near-Infrared Fluorescent Nanoparticles as Combined MR/Optical Imaging Probes" <i>Bioconjugate Chem.</i> , 2002, pp. 554-560, Vol. 13.		
	R43	JOSEPHSON, L. <i>et al.</i> , "High-Efficiency Intracellular Magnetic Labeling with Novel Superparamagnetic-Tat Peptide Conjugates" <i>Bioconjugate Chem.</i> , 1999, pp. 186-191, Vol. 10.		
	R44	KANE, R.S. <i>et al.</i> , "Synthesis of Doped ZnS Nanoclusters within Block Copolymer Nanoreactors" <i>Chem. Mater.</i> , 1999, pp. 90-93, Vol. 11.		
	R45	KIM, S. <i>et al.</i> , "Near-Infrared Fluorescent Type II Quantum Dots for Sentinel Lymph Node Mapping" <i>Nature Biotech.</i> , January 2004, pp. 93-97, Vol. 22, No. 1.		
	R46	KIRCHER, M.F. <i>et al.</i> , "A Multimodal Nanoparticle for Preoperative Magnetic Resonance Imaging and Intraoperative Optical Brain Tumor Delineation" <i>Cancer Research</i> , December 1, 2003, pp. 8122-8125, Vol. 63.		
	R47	KUBO, T. <i>et al.</i> , "Enhancement of photoluminescence of ZnS:Mn nanocrystals modified by surfactants with phosphate or carboxyl groups via a reverse micelle method" <i>Journal of Luminescence</i> , 2002, pp. 39-45, Vol. 99.		
	R48	LARSON, D.R. <i>et al.</i> , "Water-Soluble Quantum Dots for Multiphoton Fluorescence Imaging in Vivo" <i>Science</i> , May 30, 2003, pp. 1434-1436, Vol. 300.		
	R49	LEWIS, J.S. <i>et al.</i> , "Control of point defects and space charge in electroluminescent ZnS:Mn thin films" <i>J. of Appl. Physics</i> , December 1, 2002, pp. 6646-6657, Vol. 92, No. 11.		
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	R51	SMITH, D.H. <i>et al.</i> , "New Magnetic Resonance Imaging Techniques for the Evaluation of Traumatic Brain Injury" <i>Journal of Neurotrauma</i> , 1995, pp. 573-577, Vol. 573, Vol. 12.		
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Sheet	7	of	12	Attorney Docket Number	UF.420XC1

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	R53	MORAWSKI, A.M. <i>et al.</i> , "Targeted Nanoparticles for Quantitative Imaging of Sparse Molecular Epitopes With MRI" <i>Magnetic Resonance in Medicine</i> , 2004, pp. 480-486, Vol. 51.		
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	R66	SCHROEDTER, A. <i>et al.</i> , "Ligand Design and Bioconjugation of Colloidal Gold Nanoparticles" <i>Angew. Chem. Int. Ed.</i> , 2002, pp. 3218-3221, Vol. 41, No. 17.		
	R67	SHARMA, P. <i>et al.</i> , "Nanoparticles for bioimaging" <i>Advances in Colloid and Interface Science</i> , 2006, pp. 471-485, Vol. 123-126.		
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	R70	SONG, K.K. <i>et al.</i> , "Highly luminescent (ZnSe)ZnS core-shell quantum dots for blue to UV emission: synthesis and characterization" <i>Curr. Applied Physics</i> , 2001, pp. 169-173, Vol. 1.		
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	R73	SUYVER, J.F. <i>et al.</i> , "Synthesis and Photoluminescence of Nanocrystalline ZnS:Mn <sup>2+</sup> " <i>Nano Letters</i> , 2001, pp. 429-433, Vol. 1, No. 8.		
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	R76	VAN DE RIJKE, F. <i>et al.</i> , "Up-converting phosphor reporters for nucleic acid microarrays" <i>Nature Biotechnol.</i> , March 2001, pp. 273-276, Vol. 19.		
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	R79	WANG, Y. <i>et al.</i> , "Nanometer-Sized Semiconductor Clusters: Materials Synthesis, Quantum Size Effects, and Photophysical Properties" <i>J. Phys. Chem.</i> , 1991, pp. 525-532, Vol. 95.		
	R80	WU, X. <i>et al.</i> , "Immunofluorescent labeling of cancer marker Her2 and other cellular targets with semiconductor quantum dots" <i>Nature Biotech.</i> , January 2003, pp. 41-46, Vol. 21.		
	R81	YANG, H. <i>et al.</i> , "Syntheses and applications of Mn-doped II-VI semiconductor nanocrystals" <i>J. Nanosci. Nanotechnol.</i> , September 2005, pp. 1364-1375, Vol. 5, No. 9, abstract.		
	R82	YANG, H. <i>et al.</i> , "Photoluminescent and electroluminescent properties of Mn-doped ZnS nanocrystals" <i>J. of Appl. Phys.</i> , January 1, 2003, pp. 586-592, Vol. 93, No. 1.		
	R83	YANG, H. <i>et al.</i> , "Enhanced photoluminescence from CdS:Mn/ZnS core/shell quantum dots" <i>Appl. Phys. Lett.</i> , March 24, 2003, pp. 1965-1967, Vol. 82, No. 12.		
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	R92	AGUAYO, J.B. <i>et al.</i> , "Nuclear magnetic resonance imaging of a single cell" <i>Nature</i> , 1986, pp. 190-191, Vol. 322.		
	R93	ALIVISATOS, A. P., "Less Is More in Medicine" <i>Scientific American</i> , September 2001, pp. 66-73, Vol. 285.		
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	R108	KREEL, L., "Medical imaging" <i>Postgraduate Medical Journal</i> , 1991, pp. 334-346, Vol. 67.		
	R109	Invitrogen, "Qdot® Conjugates Protocol Handbook" Quantum Dot Invitrogen nanocrystal technologies, December 12, 2005.		
	R110	LANGER, S.G. <i>et al.</i> , "Imagine Acquisition: Ultrasound, Computed Tomography, and Magnetic Resonance Imaging" <i>World Journal of Surgery</i> , 2001, pp. 1428, Vol. 25.		
	R111	PANYAM, J. <i>et al.</i> , "Fluorescence and electron microscopy probes for cellular and tissue uptake of poly(D,L-lactide-co-glycolide) nanoparticles" <i>International Journal of Pharmaceutics</i> , 2003, pp. 1-11, Vol. 262.		
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			Application Number	10/590,590	
			Filing Date	August 24, 2006	
			First Named Inventor	Swadeshmukul Santra	
			Group Art Unit	1636	
Examiner Name					
Attorney Docket Number	UF.420XC1				
Sheet	12	of	12		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	R118	SANTRA, S. <i>et al.</i> , "Synthesis of Water-Dispersible Fluorescent, Radio-Opaque, and Paramagnetic CdS:MnZnS Quantum Dots: A Multifunctional Probe for Bioimaging" <i>J. Am. Chem. Soc.</i> , 2005, pp. 1656-1657, Vol. 127.	
	R119		
	R120		
	R121		
	R122		
	R123		
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